Agencies work to rescue Silvery Minnow

by Mitch Frazier & Bruce Hill, Jr. U.S. Army Corps of Engineers Public Affairs

ALBUQUERQUE - Less than 12 months after agencies logged one of the most successful Rio Grande Silvery Minnow rescue efforts on New Mexico's Rio Grande, officials in the state are gearing up for what could be one of the toughest years yet in the battle to protect the species.

Arid conditions in the state and limited projected snowmelt runoff from the Rio Grande Basin have officials concerned many of the minnows rescued in 2005 will be lost when the river dries in the summer sun.

"As of June 15th the Rio Grande is scheduled to start drying at an accelerated rate," said Brett Thompson, the Corps' fisheries biologist in Albuquerque. "Volunteer crews are currently being put together to assist the U.S. Fish and Wildlife Service in a joint effort to rescue Rio Grande Silvery Minnows that become stranded in isolated/drying pools along the Rio Grande River." The work is physically demanding and the days are long, and being physically fit and prepared to work long hours under any weather condition is a must.

In February 2006, the river (Rio Grande) was predicted to begin drying by March with slow spring runoff and higher irrigation demands, according to April Sanders, the Army Corps' of Engineers project manager for Upper Rio Grande Water Operation Program (URGWOP). With this year's flows being some of the worst on record, and with the mountain snow pack the lowest depth in recorded history, the Corps finds itself in rescue operations already.

Photo by Frank Martin, U.S. Army Corps of Engineers

U.S. Army Corps of Engineers employees and other volunteers net Silvery Minnows along the Rio Grande in 2005. The rescue effort took place last year during one of the wettest seasons on record. Another multi-agency effort to protect the species is currently underway this year under one of the driest seasons.

The U.S. Army Corps of Engineers, U.S. Bureau of Reclamation and U.S. Fish and Wildlife Service are the primary government agencies doing the actual rescue, said Michael D. Hatch, U.S. Fish and Wildlife Service Fisheries Biologist. "But we're not doing it alone," he said. "We're receiving other assistance from organizations like the Interstate Stream Commission (ISC) that scouts and alerts the U.S. Fish and Wildlife Service of river conditions to help target rescue operations."

As the shallow meandering river dries, it creates small isolated pools trapping the endangered Silvery Minnow. Once trapped, the fish become easy prey for predators and are subjected to intense heat and reduced oxygen levels in the small shallow pools, said Thompson.

We are already putting teams of employees, contractors and volunteers out in the river to collect the fish and transport them to other reaches of the river that have perennial flow, said Thompson.

After high-mountain run-off totals last year slowed to a trickle in the arid summer sun, Thompson and teams of rescuers waded through the river's isolated puddles collecting the fish and transporting them in

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warm oxygenated water to other reaches of the river.

Thanks to the rescue efforts and a near perfect spawning season last year, millions of the fish survived. Now government officials have to figure out where this new large fish population will live when the water evaporates later this year.

More than 20 local, state and federal government agencies and civic groups have teamed up to find a way to save the endangered fish. The Middle Rio Grande Endangered Species Act Collaborative Program "is taking a holistic look at the basin to find ways to maximize the health of the environment while meeting the needs of the basin," said Sanders. "We're finalizing the draft long-term management plan now that will focus on ways to recover the species," she said, a 15-year veteran of engineering work along the river.

Once one of the most abundant and widespread fishes in the Rio Grande Basin, the Silvery Minnow now only survives in a 170-mile stretch of the Rio Grande in New Mexico. Decades of dam building and infrastructure additions along the river decreased the connectivity of slow moving warm waters the fish need for reproduction.

The interruption thwarted the fishes' reproductive cycle and plummeting population totals prompted the U.S. Fish and Wildlife Service to list the Silvery Minnow as an endangered species in 1994. Introduction of exotic bass species and channel catfish into the river have also complicated the recovery efforts, as these new fish feed on the minnows.

In 2003 the U.S. Fish and Wildlife Service issued a Biological Opinion (B.O.) that listed a host of alternatives to save the species. Since issuing the B.O., two fish hatcheries have been built and one is under construction, upstream reservoirs have changed their annual operations, and habitat has been built to provide the fish the slow-moving currents the minnows need to reproduce.

In 2004, there were 12,865 Silvery Minnows salvaged, said Hatch.

In 2005, the number skyrocketed to 626,444.

"The number of Silvery Minnows found last year

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was exceedingly high," he said. With only one week into this year's rescue operation the number salvaged is already at 12,037.

The efforts are all steps in the right direction, Sanders said, but their successes won't be fully realized until water quantity on the river is addressed. "The river is simply over allocated," she said. "With so many competing needs for water irrigation, drinking water, fish habitat…there's not always enough water for everyone, especially in low-flow years like this one.

"I think we are all going to have to take a hard look at things and figure out how we can do this differently."

One idea Sanders and the URGWOP team are evaluating, is to provide a different approach to managing the basin's water, which is to provide additional upstream conservation of water earmarked for the fish rescue effort. Although no final determination has been made, Abiquiu Reservoir north of Albuquerque could be a possible source of additional water storage to supplement downstream flows for the small fish during times of drought, she said.

The Silvery Minnow rescue effort is the latest on the list of labors to restore declining species populations along the river. Since development along the river began more than 100 years ago, several species have been lost.

The Silvery Minnow is an indicator species – a barometer of sorts of the environmental health of the ecosystem, Thompson said. "To lose it (the species) would be devastating."

"This is about rescuing the Silvery Minnow, but it's also about improving the ecosystem overall," he said.